

What is claimed is:

1. An isolated nucleic acid molecule encoding a polypeptide of SEQ ID NO: 2 or SEQ ID NO: 4, or polypeptide fragment thereof, wherein said polypeptide or polypeptide fragment mediates a detectable physiological or behavioral effect in mammals.

2. An isolated nucleic acid molecule of claim 1, wherein said nucleic acid molecule is a DNA or RNA.

3. An isolated nucleic acid molecule that hybridizes under high stringency conditions to a nucleic acid molecule of claim 1.

4. An isolated nucleic acid molecule that is complementary to a nucleic acid molecule of claim 1.

5. An oligonucleotide probe or primer comprising about 7 to about 50 nucleotides of a nucleic acid of claim 1.

6. A composition comprising an isolated nucleic acid molecule of claim 1 and a suitable adjuvant.

7. A vector comprising an isolated nucleic acid molecule of claim 1, wherein said vector expresses in cells the polypeptide encoded by said nucleic acid molecule.

8. An isolated cell comprising a vector of claim 7, wherein said cell is a mammalian, bacterial, insect or yeast cell.

9. An isolated cell of claim 8, wherein said polypeptide is expressed as a cell-surface receptor.

10. An isolated nucleic acid molecule which encodes a polypeptide of SEQ ID NO: 2 or SEQ ID NO: 4.

11. An isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO: 1 or SEQ ID NO: 3.

12. An isolated polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 2 or SEQ ID NO: 4, or fragment thereof, wherein said polypeptide or fragment thereof mediates a detectable physiological or behavioral effect in mammals.

13. A polypeptide of claim 12 which is a human polypeptide.

14. A composition comprising an isolated polypeptide of claim 12 and a suitable adjuvant.

15. An isolated polyclonal or monoclonal antibody that specifically binds to a polypeptide of claim 12.

16. A composition comprising an isolated polyclonal or monoclonal antibody of claim 15 and a suitable adjuvant.

17. An isolated polypeptide comprising the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 4.

18. A method for mediating a physiological disorder comprising administering to a subject an effective amount of a composition comprising an isolated nucleic acid molecule of claim 1 and inducing expression thereof, wherein said subject is in need of treatment for diseases or disorders selected from the group consisting of infertility; disorders related to contraception; disorders related to hormonal regulation, sexual dysfunction, erectile dysfunction; neurological-, psychiatric-, liver-, spleen disorders; cardiovascular disorders; cancer; and known or unknown disorders related to the aberrant expression of the human pheromone receptor hV3R1 or hV3R8.

19. A method for mediating a physiological disorder comprising administering an effective amount of an isolated polypeptide of claim 12 to a subject, wherein said

subject is in need of treatment for diseases or disorders selected from the group consisting of infertility; disorders related to contraception; disorders related to hormonal regulation, sexual dysfunction, erectile dysfunction; neurological-, psychiatric-, liver-, spleen disorders; cardiovascular disorders; cancer; and known or unknown disorders related to the aberrant expression of the human pheromone receptor hV3R1 or hV3R8.

20. A method for mediating a physiological disorder comprising administering an isolated polyclonal or monoclonal antibody of claim 16, wherein said subject is in need of treatment for diseases or disorders selected from the group consisting of infertility; disorders related to contraception; disorders related to hormonal regulation, sexual dysfunction, erectile dysfunction; neurological-, psychiatric-, liver-, spleen disorders; cardiovascular disorders; cancer; and known or unknown disorders related to the aberrant expression of the human pheromone receptor hV3R1 or hV3R8, said method comprising administering to said subject an effective amount of said composition by topical, oral, inhalable, subcutaneous or intramuscular administration.

21. A method for detecting a target nucleic acid molecule in a sample using as a probe an at least 7 nucleotide contiguous segment in length of an isolated nucleic acid molecule of claim 1, said method comprising the steps of:

a) exposing said probe to a sample, under conditions where the probe hybridizes under high, medium or low stringency conditions to said target nucleic acid molecule in the sample; and

b) detecting said target nucleic acid molecule hybridized to said probe.

22. The method of claim 21, wherein said probe is immobilized or in solution.

23. A method for detecting a polypeptide in a sample using as a probe a polypeptide of claim 12, said method comprising the steps of:

a) exposing said probe to a sample, under conditions where the probe specifically binds to said polypeptide in the sample, and

b) detecting said polypeptide bound to the probe.

24. The method of claim 23, wherein said probe is immobilized or in solution.

25. A method of identifying molecules that mediate a detectable physiological or behavioral response in mammals by screening for the interaction of a test molecule with a polypeptide molecule of claim 12.

26. A transgenic animal that expresses the polypeptide encoded by the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 4.

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